

Name Key

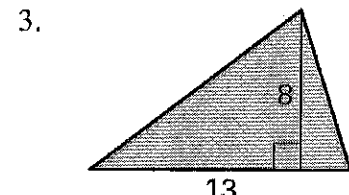
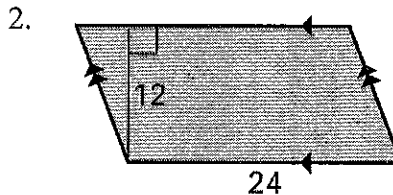
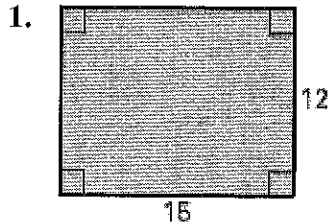
Date \_\_\_\_\_

## LESSON 11.1

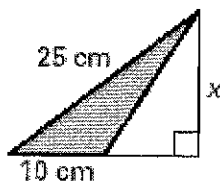
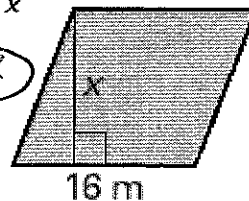
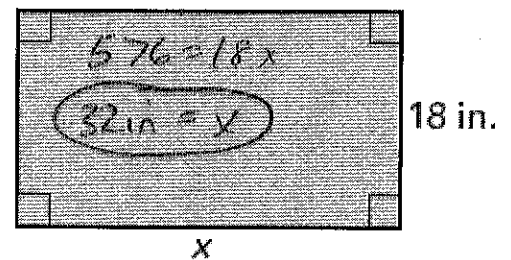
## Practice C

For use with pages 720-726

Find the area of the polygon.

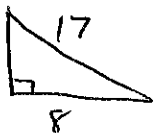


Find the value of x.

4. Area = 70 cm<sup>2</sup>5. Area = 104m<sup>2</sup>6. Area = 576in<sup>2</sup>.

The lengths of the hypotenuse and one leg of a right triangle are given. Find the perimeter and area of the triangle.

7. Hypotenuse: 17 ft; leg: 8ft



$$17^2 = 8^2 + h^2$$

$$15 = h$$

$$A = \frac{1}{2} \cdot 8 \cdot 15$$

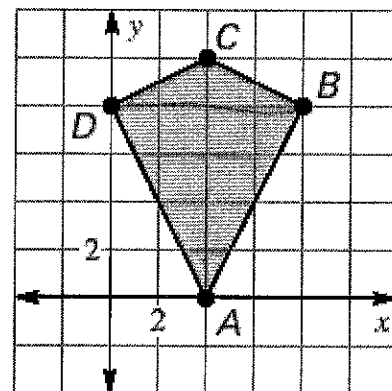
$$A = 60 \text{ ft}^2$$

$$P = 40 \text{ ft}$$

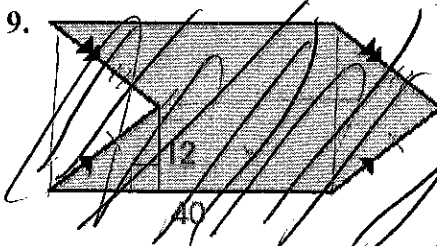
8. Find the area of the quadrilateral.

$$A = \frac{1}{2} \cdot 8 \cdot 10$$

$$A = 40 \text{ u}^2$$



Find the area of the shaded polygon.



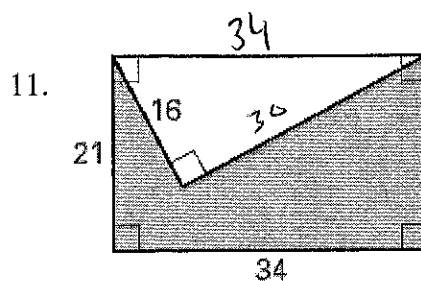
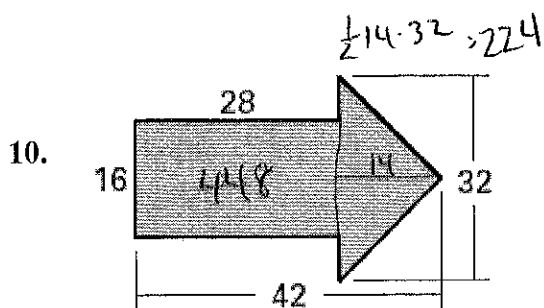
$$A = 24 \cdot 40$$

$$A = 960 \text{ u}^2$$

New problem

$$A = 6 \cdot 8$$

$$48 \text{ u}^2$$



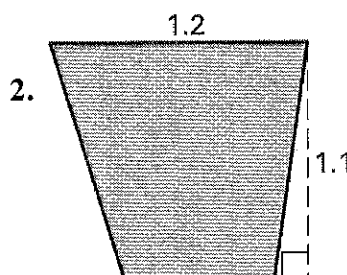
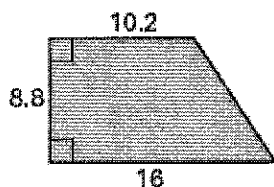
12. **Algebra** The area of a triangle is 225 square units. The base of the triangle is twice the height. Find the base and the height.

13. **Algebra** The area of a rectangle is 84 square inches. The length of the rectangle is 2 inches longer than twice the width. Find the width and the perimeter of the rectangle.

14. **Trigonometry** In  $\square ABCD$ , base  $AD$  is 25 units and  $AB$  is 12 units. Find the height and area of  $\square ABCD$  if  $m\angle A$  is  $30^\circ$ .

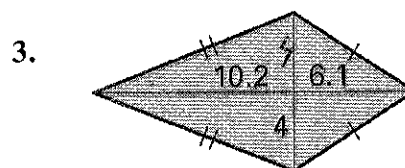
LESSON 11.2  
Practice C  
Find the area.

$A = \frac{1}{2} 8.8 (10.2 + 16)$   
 $A = 115.28 u^2$



$A = \frac{1}{2} 1.1 (1.2 + 0.7)$

$A = 1.045 u^2$



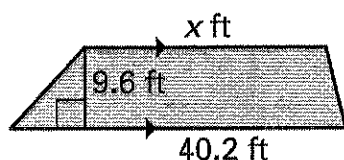
$A = \frac{1}{2} 8 \cdot 16.3$

$A = 65.2 u^2$

4. Area =  $288.96 \text{ ft}^2$

5. Find  $x$ . Area =  $80 \text{ m}^2$

6. Find the area.

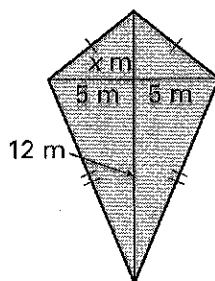


$288.96 = \frac{1}{2} 9.6 (x + 40.2)$

4.8

$60.2 = x + 40.2$

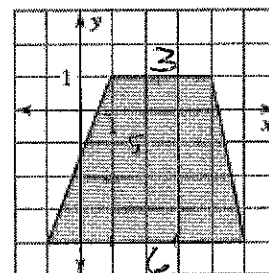
$20 = x$



$80 = \frac{1}{2} 10 (x + 12)$

$16 = x + 12$

$4 m = x$



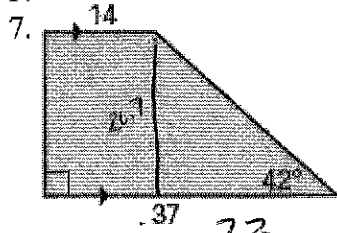
$\frac{1}{2} 5 (3 + 6)$

$A = 22.5 u^2$

$$37^2 = 35^2 + x^2$$

$$12 = x$$

Find the area.



$$\frac{1}{2}(20.7)(14+37)$$

$$= 528.1 \text{ m}^2$$

## LESSON 11.3

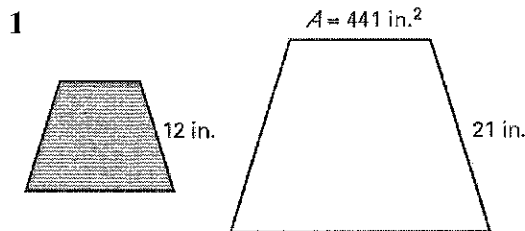
## Practice C

The polygons are similar. Find the ratio (shaded to unshaded) of the perimeters and of the areas. Find the unknown area.

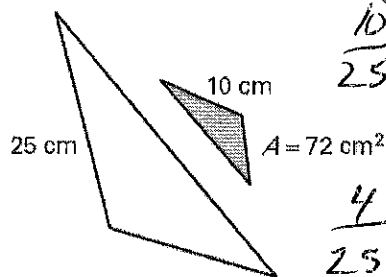
$$\frac{12}{21} = \frac{4}{7}$$

$$\frac{16}{49} = \frac{A}{441}$$

$$A = 144 \text{ in}^2$$



2.

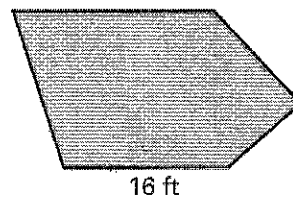
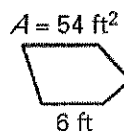


$$\frac{10}{25} = \frac{2}{5}$$

$$\frac{4}{25} = \frac{72}{A}$$

$$A = 450 \text{ cm}^2$$

4.

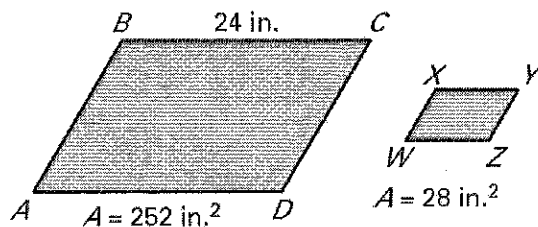


$$\frac{16}{6} = \frac{8}{3}$$

$$\frac{64}{9} = \frac{A}{54}$$

$$A = 384 \text{ ft}^2$$

5. Use the given area to find XY.



$$\frac{252}{28} = \frac{9}{1}$$

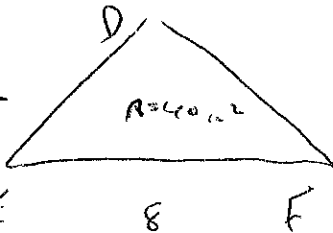
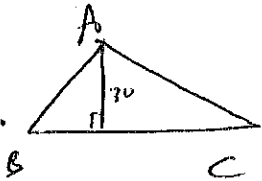
$$5x = \frac{3}{1}$$

$$\frac{3}{1} = \frac{24}{x}$$

$$x = 8 \text{ in}$$

6.

Area  $\triangle ABC$  and  $\triangle DEF$  are similar. The height of  $\triangle ABC$  is 30 inches. The base of  $\triangle DEF$  is 8 inches and the area is 40 square inches. Find the area of  $\triangle ABC$ .



$$40 = \frac{1}{2} \cdot 8 \cdot h$$

$$10 = h$$

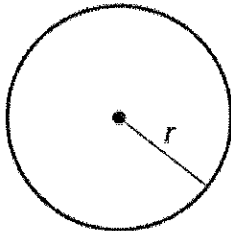
$$\frac{3}{1} = \frac{9}{1} = \frac{A}{40}$$

$$360_{in^2} = A$$

11.4  
1. Find C.

$$11.4\pi \text{ cm}$$

$$\approx 35.8 \text{ cm}$$

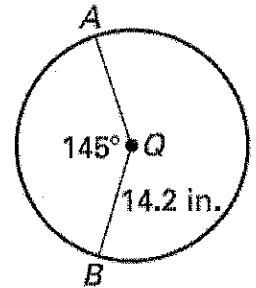


$$r = 5.7 \text{ cm}$$

2. Find the length of  $\widehat{AB}$ .

a.  $35.9 \text{ in}$

$$\frac{145}{360} 28.4\pi$$



3. In circle D shown below,  $\angle ADC \cong \angle BDC$ .

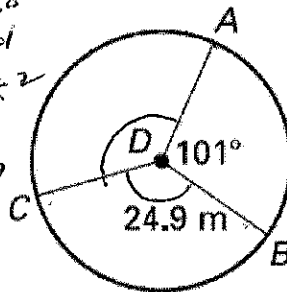
$$m\widehat{ACB} = 259^\circ$$

$$m\widehat{CB} = 129.5$$

$$\text{Length } \widehat{ACB} = 112.6 \text{ m}$$

$$\text{Length } \widehat{CB} = 56.3 \text{ m}$$

$$m\widehat{ABC} = 230.5$$

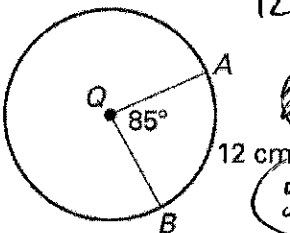


$$\text{Length } \widehat{BAC} = 168.2 \text{ m}$$

$$2\pi(24.9) = 56.3$$

4. Find the Circumference

$$12 \cdot \frac{85}{360} 2\pi r$$

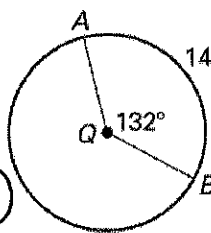


$$50.8 \cdot 2\pi r$$

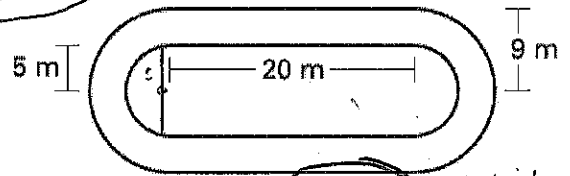
5. Find the radius

$$\frac{14.2}{14.2} = \frac{132}{360} 2\pi r$$

$$6.25 \text{ m}$$



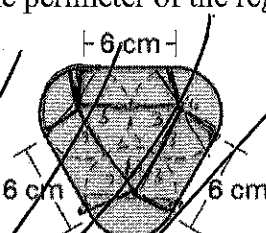
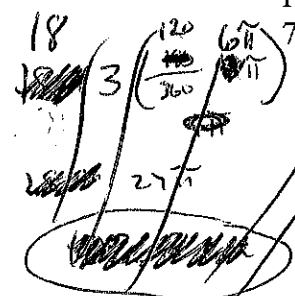
6. Find the distance around the track on the inside lane and the outside lane.



$$\text{Inside } 40 + 10\pi = 71.4 \text{ m}$$

$$\text{Outside } 40 + 18\pi = 96.5 \text{ m}$$

Find the perimeter of the regions

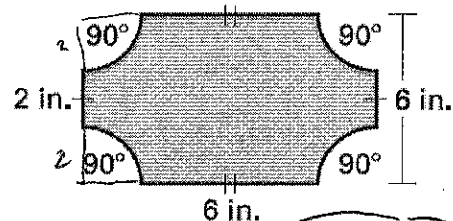


$$18 + 6\pi$$

$$36 + 85 \text{ cm}$$

changed  
New # 7  
28.6 in

8.



$$4 + 12 + 4\pi = 28.6 \text{ in}$$